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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,235	08/10/2006	Callum Colquhoun	DEP5167	1326

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NEW BRUNSWICK, NJ 08933-7003

EXAMINER

FERNANDEZ, KATHERINE L

ART UNIT	PAPER NUMBER
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3768

MAIL DATE	DELIVERY MODE
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08/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

ED

Office Action Summary

Application No.

10/567,235

Applicant(s)

COLQUHOUN, CALLUM

Examiner

Katherine L. Fernandez

Art Unit

3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/3/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The Information Disclosure Statement submitted on February 3, 2006 is acknowledged. The Information Disclosure Statement meets the requirements of 37 C.F.R. 1.97 and 1.98 and therefore the references therein have been considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson et al. (US Patent No. 6,491,699) in view of Taylor et al. (US Patent No. 5,695,500).

With regards to claims 1-4 and 7-13, Henderson et al. disclose a bone marker (10) for use in image guided surgery (column 1, lines 13-20), comprising a support (surgical instrument (114) and rigid guide tube (424)) having an anchor mechanism (140) for anchoring the support in a bone (i.e. skull of patient), the bone marker further comprising at least one reference member (144) detectable by an image-guided system (126), the at least one reference member being attached to the support (column 3, line 29 through column 4, line 15). Henderson et al. further disclose that the anchor

mechanism comprises at least one fixation member (432,1040) for anchoring the bone marker in the bone, and a coupling member (446a,b) for coupling the support to the fixation member (i.e. threaded screw (1040) as seen in Figure 4C) (column 7, lines 27-45; column 9, lines 16-23; See Figures 4A and 4C). Although Henderson et al. do not specifically disclose that the diameter of the threaded screw is not more than about 2 mm, it would have been obvious to one of ordinary skill in the art to use a screw with not more than about 2 mm in order to provide a more precise fit. The coupling member is adjustable to allow rotation of the support about the fixation member (column 7, lines 27-45). The reference members can be either LEDs (i.e. reflect signals) or can be a transducer or magnetic sensing device (i.e. transmit signals) (column 3, lines 38-46).

However, Henderson et al. do not specifically disclose that the support comprises at least one limb that is resiliently deformable. Taylor et al. disclose a system and method for positioning, moving and locating surgical instruments for performing surgery on a patient (column 1, lines 12-14). They disclose that their system includes a third link (20) that comprises of a frame (52) (column 7, lines 42-44). To counter balance the effects of gravity on the third link, a counterbalance system is provided which comprises of dowels (60) and constant force springs (62; i.e. deformable limb; tightly coiled around dowel; abutting surfaces of wire are flat, as seen in Figure 1A) (column 7, lines 42-56). See Figure 1A. As can be seen in Figure 1A, the outer diameter of the deformable limb (62) to its inner diameter is at most 3:1. At the time of the invention, it would have been obvious to one of ordinary skill in the art to include at least one limb that is deformable to the system of Henderson et al. The motivation for doing so would have been to

counter balance the effects of gravity and make the limb easier for a surgeon to move, as taught by Taylor et al. (column 7, lines 50-56).

With regards to claim 14, Henderson et al. in view of Taylor et al. disclose the bone marker as discussed above. Further, Henderson et al. discloses a processing system (130) for calculating the position of the reference members and a location on the bone relative to the position of the reference members (column 4, line 62 through column 5, line 27) and an actuation system (column 5, lines 34-48; column 11, lines 11-30) for moving an apparatus to a location calculated by the processing system.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson et al. in view of Taylor et al. as applied to claims 1-4 and 7-14 above, and further in view of Tontarra (US Pub. No. 2002/0151931).

As discussed above, Henderson et al. in view of Taylor et al. meet the limitations of claim 1. However, they do not specifically disclose that the deformable limb is made from a damped elastomer. Tontarra discloses a surgical instrument having a main part and at least one part moveable relative thereto and also a handle which has a stationary handle portion connected to the main part and an actuatable handle portion connected to the moveable part (pg. 1, paragraph [0003]). They further disclose a configuration in which the releasable articulated connection is provided with an elastically yieldable latch element, preferably an elastomer (pg. 2, paragraph [0013]). At the time of the invention, it would have been obvious to one of ordinary skill in the art to have the deformable limb be made from a damped elastomer. The motivation for doing so would have been to provide a releasable and movable part, as taught by Tontarra (pg. 2, paragraph [0013]).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson et al. in view of Taylor et al. as applied to claims 1-4 and 7-14 above, and further in view of Burbank et al. (US Patent No. 6,602,251).

As discussed above, Henderson et al. in view of Taylor et al. meet the limitations of claim 1. However, they do not specifically disclose that the deformable limb is made from a shape memory alloy. Burbank et al. disclose a device and method for occlusion of the uterine arteries (column 1, lines 10-13). They disclose that their invention comprises of a probe that includes a tubular member and a wire that is moveable longitudinally relative to the probe and is formed of a shape memory alloy (column 12, lines 51- 67). At the time of the invention, it would have been obvious to one of ordinary skill in the art to have the deformable limb be made from a shape memory alloy. The motivation for doing so would have been to have the deformable limb have the ability to change from a first shape to a second shape when a particular stimulus affects it, thus increasing it's versatility, as taught by Burbank et al. (column 12, lines 51-67).

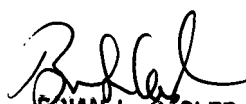
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine L. Fernandez whose telephone number is (571)272-1957. The examiner can normally be reached on 8:30-5, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni M. Mantis-Mercader can be reached on (571)272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3768

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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